REMARKS

Claims 1-9 are pending in this application with Claims 1, 7 and 8 being amended and claim 9 being added by this response.

Claim 1 has been formally amended to replace the word "regulation" by "rate control". Also, as an essential characteristic of the present claimed invention is the global control at a band level, claim 1 has been amended to recite a band constituted by at least two panels as opposed to the original claim reciting "one" panel (If only one panel constitutes the horizontal band, the global control corresponds to the encoder control).

Claims 1 and 7 have been amended to recite that each encoder of a band implements a rate control algorithm by taking into account a same video buffering verifier (VBV) calculated for the whole band. Support for this amendment to Claim 7 can be found throughout the specification and specifically on page 3, lines 31 to page 4 line 7 and page 4 lines 32-36.

Another characteristic of original claim 7, dynamic allocation, has been added in new claim 9. Original claim 8 has been amended for purposes of clarity.

Rejection of claims 1-5, 7 and 8 under 35 U.S.C. 103(a)

Claims 1-5, 7 and 8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Andrew et al. in view of Blawat et al.

The present claimed invention recites a process and device for the MPEG type video coding of high definition images wherein the image is split into panels and an encoder is assigned to each panel. Two or more panels constitute, over the length of the image, a horizontal band of the image. A rate control is implemented at a band level as a function of a preset bit rate for the band. Each encoder of the band takes into account a same Video Buffering Verifier (VBV) calculated for the whole band.

Andrew et al. discloses the partitioning of a frame into blocks. The blocks are divided into horizontal rows and all the blocks of a row are processed by a single DSP (see column 7, lines 53-58). Consequently, the description of Andrew et al. does not correspond to the claimed process and device, as the global control according to the present claimed invention can not be implemented as the line (horizontal row) is processed by a same processor.

Blawat et al. disclose the use of a VBV buffer for controlling the output bit rate. The process of Blawat et al. deals with the use of only one coder and consequently Blawat et al. neither disclose nor suggest a global rate control as in the present claimed invention.

As the coding of the image of the present claimed invention is of the MPEG type, if several coders are used to code different parts of the image, each coder would operate separately through a feedback loop acting on the quantization step to control its output rate.

If the buffer size of the decoder is, for example, 8 MB and if there are three panels constituting a band and the image, it is respectfully submitted that the man skilled in the art would choose a separate coder for each panel, a separate rate control for each panel, a separate VBV buffer for each coder and a separate control algorithm for each VBV, giving each of the three virtual buffers a size of 8/3 MB. The main idea of the present claimed invention is the implementation of the rate control algorithm of each coder at a band level by using a same virtual buffering verifier (VBV) calculated for the whole band. This global VBV buffer takes into account global data, i.e. data concerning the whole band. Such is neither disclosed nor suggested by either Andrew et al. or Blawat et al.

Instead of having constraints specific to each coder, an only constraint of the present claimed invention exists for the whole band, the one relating to the single Video Buffer Verifier. The constraint for the band is consecutively reduced as it is no longer an

addition of constraints of each coder dedicated to the band (overflow can be compensated by underflow...) allowing improvement of the coding image quality.

The problem concerning the use of several VBV's is not raised in Blawat et al. In conclusion, none of the cited documents, taken separately or combined, discloses or suggests the invention as claimed

In view of the above remarks and amendments to claims 1 and 7, it is respectfully submitted that claims 1 and 7 are patentable over of Andrew et al. when taken alone or in combination with Blawat et al. Withdrawal of the rejection under 35 U.S.C. 103(a) of claim 1 as amended is respectfully requested. Additionally, it is respectfully submitted that as claims 2-5 are dependent on claim 1, and claims 8 and 9 are dependent on claim 7, these claims are also patentable for the same reasons as discussed above and withdrawal of the rejection of claims 1-5 and 7-8 is also requested.

Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due with this response. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,
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Patricia M. Fedorowycz